

Shah

RAW SEQUENCE LISTING

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Application Serial Number: 10/507, 446 A
Source: PCJ
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PCT

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/507,446A

DATE: 03/14/2006

TIME: 11:05:00

Input Set : A:\sequence listing US 10507446.txt

Output Set: N:\CRF4\03142006\J507446A.raw

3 <110> APPLICANT: GOTO, Hidetsugu
 4 NAKANO, Shigeru
 6 <120> TITLE OF INVENTION: GENE PARTICIPATING IN ACETIC ACID TOLERANCE, ACETIC ACID
 BACTERIA
 7 BRED USING THE GENE, AND PROCESS FOR PRODUCING VINEGAR WITH THE
 8 USE OF THE ACETIC ACID BACTERIA
 10 <130> FILE REFERENCE: 4439-4024
 12 <140> CURRENT APPLICATION NUMBER: US/10/507,446A
 13 <141> CURRENT FILING DATE: 2004-09-13
 15 <150> PRIOR APPLICATION NUMBER: PCT/JP03/02946
 16 <151> PRIOR FILING DATE: 2003-03-12
 18 <160> NUMBER OF SEQ ID NOS: 10
 20 <170> SOFTWARE: PatentIn version 3.2
 22 <210> SEQ ID NO: 1
 23 <211> LENGTH: 2016
 24 <212> TYPE: DNA
 25 <213> ORGANISM: Gluconacetobacter entanii
 27 <400> SEQUENCE: 1
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 30 aattttgtca tggaaatcga ggacacgctc gacggttccg tgccgcttga ccggctggct 120
 32 gatatccgca ccattgtatgatc tctggctgcc tgcgtatcgatc ctctcaagca ggcattctga 180
 34 tacaccatgt cgattttctc gaaatatgaa ggccttgcgt ccgcctgtc ggcggtaacg 240
 36 gccgatggtg ggcgcaaccc gttcaacgctc gtgatcgaaa agccatttc ctccacggtc 300
 38 gggctgatcg aaggggcgcga gacgcttctg ttccggcacca acaactatct tgggctgagc 360
 40 cagtcggccgg ccgcgatcgaa agccggcggtg gaagccgcca gggcttatgg tgcggcagc 420
 42 accggatcgc gcatcgccaa tggcacgcag ggtctgcacc gccagttgga agagcggctg 480
 44 tgcaccttct tccgtcgatc gcaatcgatc gtgtttcca ccgggttacca ggccaatctg 540
 46 ggcacgattt ccgcacttggc gggcaaggac gattatctgc tgcttgcatgc ggacagccat 600
 48 gccagcatct atgatggcag ccgccttggc catgcgcagg tcatccgcctt ccgtcacaac 660
 50 gacgcccgtatc acctgcataa acgcctgcgc cgccttgcgt gtacgcccgg agcgaaactg 720
 52 gtcgtggatc aaggcatcta ttccatgatc ggcgacgtcg ttcccatggc ggaattcgcg 780
 54 gccgtcaagg gggaaaccgg tgcatggctg ctggcgatg aagcacattc cgttgggtta 840
 56 atgggcgaac atggccgtgg cgtggcgaa tccgacggcg tggaaagatga tgcgatctt 900
 58 gtcgtcgatc cttttccaa aagccttggc acggttggatc gctactgtgt ttccaaaccat 960
 60 gccgggctgg acctgtatccg gctgtgttgc cgtccgtaca tggttaccgc atccctggcg 1020
 62 ccggaagtca tcgcccgcac catggccgcg ctgactgaac tggaaaaccg gccgaaactg 1080
 64 cgcgtgcggatc tgatggacaa tgcacgcagg cttcatgacg ggctgcaggc ggccggcctg 1140
 66 cgcacccggcc cgcaggccag tcctgtcgatc tccgtcattc tggatgtatgt ggcgggttgc 1200
 68 gtggcgttctt ggaaccggct gctggacattt ggggttacg tcaacctcag cctggccct 1260
 70 gcaacgcccgg accagcatcc cctgctgcgg acctccgtca tggcggaccca tacgcccggag 1320
 72 cagatagacc gggccgtgaa aatcttcgcg tttgtacgcgg gcgagatggg tatcaaccgc 1380
 74 gccgctgaa aaaacctgccc tgccgtattt tccacagcag atacggcagg cagaccagcg 1440
 76 gatgccgttc cgaaaacggc cccagcggca gttcaatgcc ggaatgccgc ctgatcttcc 1500
 78 atgcgatata ggcgcgcgcata cttcaaaacg tgaaggcccc cttgaacagg cggctgacat 1560

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82	caggtgtcag	ctggggggtt	agttgatcgc	cctcagacccg	gaacggcagg	ccatcggcgc	1680										
84	gccatacatac	cggcagcagg	cgcctgtacc	gtgcttcctg	cccctgttagc	aggctacgcg	1740										
86	gcctgcggcc	gttctccaca	cgcagttccg	caccgtaagt	atgggcgaac	agggccagcc	1800										
88	agttagtcatc	ggccgtcccc	tgtgcccggac	ccagggcggc	agcccagcgc	cccgccctgcc	1860										
90	ccaccgcgcg	gataatgcag	gccaggatgg	catcggccgc	gtccggttcc	ctgaccata	1920										
92	caagccgcac	aggctggcag	aagcgtgccc	agaccgtggt	atccaacgtg	gcgctcccg	1980										
94	tcatgcggcg	gaactgcgct	atggacagga	tggcca			2016										
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98	<211>	LENGTH:	400														
99	<212>	TYPE:	PRT														
100	<213>	ORGANISM:	Gluconacetobacter entanii														
102	<400>	SEQUENCE:	2														
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105	1				5					10					15		
108	Val	Thr	Ala	Asp	Gly	Gly	Arg	Asn	Pro	Phe	Asn	Val	Val	Ile	Glu	Lys	
109						20				25					30		
112	Pro	Ile	Ser	Ser	Thr	Val	Gly	Leu	Ile	Glu	Gly	Arg	Glu	Thr	Leu	Leu	
113						35				40					45		
116	Phe	Gly	Thr	Asn	Asn	Tyr	Leu	Gly	Leu	Ser	Gln	Ser	Pro	Ala	Ala	Ile	
117						50				55					60		
120	Glu	Ala	Ala	Val	Glu	Ala	Ala	Arg	Ala	Tyr	Gly	Val	Gly	Thr	Thr	Gly	
121	65				70					75					80		
124	Ser	Arg	Ile	Ala	Asn	Gly	Thr	Gln	Gly	Leu	His	Arg	Gln	Leu	Glu	Glu	
125						85				90					95		
128	Arg	Leu	Cys	Thr	Phe	Phe	Arg	Arg	Arg	His	Cys	Met	Val	Phe	Ser	Thr	
129						100				105					110		
132	Gly	Tyr	Gln	Ala	Asn	Leu	Gly	Thr	Ile	Ser	Ala	Leu	Ala	Gly	Lys	Asp	
133						115				120					125		
136	Asp	Tyr	Leu	Leu	Leu	Asp	Ala	Asp	Ser	His	Ala	Ser	Ile	Tyr	Asp	Gly	
137						130				135					140		
140	Ser	Arg	Leu	Gly	His	Ala	Gln	Val	Ile	Arg	Phe	Arg	His	Asn	Asp	Ala	
141	145					145				150					155		160
144	Asp	Asp	Leu	His	Lys	Arg	Leu	Arg	Arg	Leu	Asp	Gly	Thr	Pro	Gly	Ala	
145						165				170					175		
148	Lys	Leu	Val	Val	Val	Glu	Gly	Ile	Tyr	Ser	Met	Met	Gly	Asp	Val	Val	
149						180				185					190		
152	Pro	Met	Ala	Glu	Phe	Ala	Ala	Val	Lys	Arg	Glu	Thr	Gly	Ala	Trp	Leu	
153						195				200					205		
156	Leu	Ala	Asp	Glu	Ala	His	Ser	Val	Gly	Val	Met	Gly	Glu	His	Gly	Arg	
157						210				215					220		
160	Gly	Val	Ala	Glu	Ser	Asp	Gly	Val	Glu	Asp	Asp	Val	Asp	Phe	Val	Val	
161	225					225				230					235		240
164	Gly	Thr	Phe	Ser	Lys	Ser	Leu	Gly	Thr	Val	Gly	Gly	Tyr	Cys	Val	Ser	
165						245				250					255		
168	Asn	His	Ala	Gly	Leu	Asp	Leu	Ile	Arg	Leu	Cys	Ser	Arg	Pro	Tyr	Met	
169						260				265					270		
172	Phe	Thr	Ala	Ser	Leu	Pro	Pro	Glu	Val	Ile	Ala	Ala	Thr	Met	Ala	Ala	
173						275				280					285		

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176 Leu Thr Glu Leu Glu Asn Arg Pro Glu Leu Arg Val Arg Leu Met Asp
 177 290 295 300
 180 Asn Ala Arg Arg Leu His Asp Gly Leu Gln Ala Ala Gly Leu Arg Thr
 181 305 310 315 320
 184 Gly Pro Gln Ala Ser Pro Val Val Ser Val Ile Leu Asp Asp Val Ala
 185 325 330 335
 188 Val Ala Val Ala Phe Trp Asn Arg Leu Leu Asp Leu Gly Val Tyr Val
 189 340 345 350
 192 Asn Leu Ser Leu Pro Pro Ala Thr Pro Asp Gln His Pro Leu Leu Arg
 193 355 360 365
 196 Thr Ser Val Met Ala Thr His Thr Pro Glu Gln Ile Asp Arg Ala Val
 197 370 375 380
 200 Glu Ile Phe Ala Val Val Ala Gly Glu Met Gly Ile Asn Arg Ala Ala
 201 385 390 395 400
 204 <210> SEQ ID NO: 3
 205 <211> LENGTH: 1360
 206 <212> TYPE: DNA
 207 <213> ORGANISM: Acetobacter aceti
 209 <400> SEQUENCE: 3
 210 gaagacagct tggatgtatc tatcccgctc gacaaactgg ctgatatacg aacgattat 60
 212 gacccgtcc ctgcattgt tgctctgaaa aacaaagggt gaggcggtgg tgacatca 120
 214 attttccaaa tttgaaggta cggcaggcgc gctgggttcc gttgtggccg taggcggtcg 180
 216 caaccctttt gctgtgtta ttgaaaaacc tgcgttccaa actgttggaa ttattgaagg 240
 218 tcgggaaacg cttcttttttgcaccaataa ctatgggg cttagtcataat ccaaaaatgc 300
 220 cattcaagca gcccacgcagg ctgcgcggc atgtggcgta ggcacaacgg gtcacgcac 360
 222 tgcaaatggc acacaatccc tgcacccgaca gcttggaaaaa gatattggcg cgtttttgg 420
 224 tcggcgtat gccatggttt tttccacggg gtatcaggca aacctcgca ttatttccac 480
 226 gctggcaggta aaggatgacc acctgttttggatgctgtat agccacgcca gtatctatga 540
 228 tggcagccgc ctgagtgca cagaagttat tcgcgttccgc cataatgatc cagacaacct 600
 230 ttataaacgc cttaaacgc tggatggcac gccaggcgcc aaattgatttgg tggtaagg 660
 232 catttattcc atgacgggta atgttgcggcc gattgcagaa tttgttgcgt taaaaaaaga 720
 234 aacaggcgct tacctgttgg tagatgaagc ccattttttt ggcgtgttgg gtcaaaaatgg 780
 236 gcgtggtgc gctgaggctg atggcgttgg agctgtatgt gactttgttgcg cacatttttgg 840
 238 ttccaaaagc ttggccacag ttggcggtt ctgcgtatct gaccatcctg agctggagtt 900
 240 tgcgtgttta aactgcccgc cctatatgtt tacggcatcg ctaccgcccgg aagtatttgc 960
 242 tgccacaacg gctgcgttga aagatatgca ggcacatcctt gatggcgta agcagcttat 1020
 244 ggcaaacgcg cagcaactac atgcagggtt tgcgtatattt gggctaaatg ccagcaaaca 1080
 246 cgcaacccca gttattgccc ttacatttgg aacagctgaa gaagctattt ccatgtggaa 1140
 248 caggcttttgg aacttgggtt tttatgtaaa tctcagcctt cctccggcta caccagattc 1200
 250 gccccgggtt ctccgttggt ccgtaatggc caccatacg cccgaacaaa ttgcgcaggc 1260
 252 tattgccata ttcaggcagg ctgcggcaga agtggcgta accatcacac cctccgttgc 1320
 254 taaaaaaa gctatttgcg cttgaatgcc ccttgcgttgc 1360
 257 <210> SEQ ID NO: 4
 258 <211> LENGTH: 404
 259 <212> TYPE: PRT
 260 <213> ORGANISM: Acetobacter aceti
 262 <400> SEQUENCE: 4
 264 Met Thr Ser Leu Phe Ser Lys Phe Glu Gly Thr Ala Gly Ala Leu Gly
 265 1 5 10 15

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268 Ser Val Val Ala Val Gly Gly Arg Asn Pro Phe Ala Val Val Ile Glu
 269 20 25 30
 272 Lys Pro Val Ser Ser Thr Val Gly Ile Ile Glu Gly Arg Glu Thr Leu
 273 35 40 45
 276 Leu Phe Gly Thr Asn Asn Tyr Leu Gly Leu Ser Gln Ser Lys Asn Ala
 277 50 55 60
 280 Ile Gln Ala Ala Gln Gln Ala Ala Ala Cys Gly Val Gly Thr Thr
 281 65 70 75 80
 284 Gly Ser Arg Ile Ala Asn Gly Thr Gln Ser Leu His Arg Gln Leu Glu
 285 85 90 95
 288 Lys Asp Ile Ala Ala Phe Phe Gly Arg Arg Asp Ala Met Val Phe Ser
 289 100 105 110
 292 Thr Gly Tyr Gln Ala Asn Leu Gly Ile Ile Ser Thr Leu Ala Gly Lys
 293 115 120 125
 296 Asp Asp His Leu Phe Leu Asp Ala Asp Ser His Ala Ser Ile Tyr Asp
 297 130 135 140
 300 Gly Ser Arg Leu Ser Ala Ala Glu Val Ile Arg Phe Arg His Asn Asp
 301 145 150 155 160
 304 Pro Asp Asn Leu Tyr Lys Arg Leu Lys Arg Met Asp Gly Thr Pro Gly
 305 165 170 175
 308 Ala Lys Leu Ile Val Val Glu Gly Ile Tyr Ser Met Thr Gly Asn Val
 309 180 185 190
 312 Ala Pro Ile Ala Glu Phe Val Ala Val Lys Lys Glu Thr Gly Ala Tyr
 313 195 200 205
 316 Leu Leu Val Asp Glu Ala His Ser Phe Gly Val Leu Gly Gln Asn Gly
 317 210 215 220
 320 Arg Gly Ala Ala Glu Ala Asp Gly Val Glu Ala Asp Val Asp Phe Val
 321 225 230 235 240
 324 Val Gly Thr Phe Ser Lys Ser Leu Gly Thr Val Gly Gly Tyr Cys Val
 325 245 250 255
 328 Ser Asp His Pro Glu Leu Glu Phe Val Arg Leu Asn Cys Arg Pro Tyr
 329 260 265 270
 332 Met Phe Thr Ala Ser Leu Pro Pro Glu Val Ile Ala Ala Thr Thr Ala
 333 275 280 285
 336 Ala Leu Lys Asp Met Gln Ala His Pro Glu Leu Arg Lys Gln Leu Met
 337 290 295 300
 340 Ala Asn Ala Gln Gln Leu His Ala Gly Phe Val Asp Ile Gly Leu Asn
 341 305 310 315 320
 344 Ala Ser Lys His Ala Thr Pro Val Ile Ala Val Thr Leu Glu Thr Ala
 345 325 330 335
 348 Glu Glu Ala Ile Pro Met Trp Asn Arg Leu Leu Glu Leu Gly Val Tyr
 349 340 345 350
 352 Val Asn Leu Ser Leu Pro Pro Ala Thr Pro Asp Ser Arg Pro Leu Leu
 353 355 360 365
 356 Arg Cys Ser Val Met Ala Thr His Thr Pro Glu Gln Ile Ala Gln Ala
 357 370 375 380
 360 Ile Ala Ile Phe Arg Gln Ala Ala Ala Glu Val Gly Val Thr Ile Thr
 361 385 390 395 400
 364 Pro Ser Ala Ala

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/507,446A

DATE: 03/14/2006
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Input Set : A:\sequence listing US 10507446.txt
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368 <210> SEQ ID NO: 5
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370 <212> TYPE: DNA
371 <213> ORGANISM: Artificial Sequence
374 <220> FEATURE:
375 <221> NAME/KEY: misc_feature
376 <222> LOCATION: (1)..(30)
377 <223> OTHER INFORMATION: synthetic primer
379 <400> SEQUENCE: 5
380 ctggctgcct gtatcgtctc tctcaagcag 30
383 <210> SEQ ID NO: 6
384 <211> LENGTH: 30
385 <212> TYPE: DNA
386 <213> ORGANISM: Artificial Sequence
389 <220> FEATURE:
390 <221> NAME/KEY: misc_feature
391 <222> LOCATION: (1)..(30)
392 <223> OTHER INFORMATION: synthetic primer
394 <400> SEQUENCE: 6
395 acggctgcag ctggcttgcc tgccgtatct 30
398 <210> SEQ ID NO: 7
399 <211> LENGTH: 30
400 <212> TYPE: DNA
401 <213> ORGANISM: Artificial Sequence
404 <220> FEATURE:
405 <221> NAME/KEY: misc_feature
406 <222> LOCATION: (1)..(30)
407 <223> OTHER INFORMATION: synthetic primer
409 <400> SEQUENCE: 7
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413 <210> SEQ ID NO: 8
414 <211> LENGTH: 29
415 <212> TYPE: DNA
416 <213> ORGANISM: Artificial Sequence
419 <220> FEATURE:
420 <221> NAME/KEY: misc_feature
421 <222> LOCATION: (1)..(29)
422 <223> OTHER INFORMATION: synthetic primer
424 <400> SEQUENCE: 8
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428 <210> SEQ ID NO: 9
429 <211> LENGTH: 30
430 <212> TYPE: DNA
431 <213> ORGANISM: Artificial Sequence
434 <220> FEATURE:
435 <221> NAME/KEY: misc_feature
436 <222> LOCATION: (1)..(30)
437 <223> OTHER INFORMATION: synthetic primer
439 <400> SEQUENCE: 9

VERIFICATION SUMMARY

PATENT APPLICATION: **US/10/507,446A**

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Input Set : **A:\sequence listing US 10507446.txt**
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